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## **SECRET**

13 June 1957

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Dear Dick:

We are forwarding herewith eight copies of Monthly Progress Letter No. 22, covering the work performed on System No. 3 during the period extending from 4 April to 4 June 1957.

Sincerely,

Burt

Enclosures:

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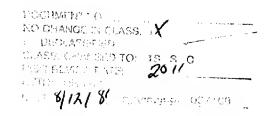
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Progress Letter No. 22
Contract No. A-101
System 3

4 April to 4 June 1957



CMCC Document No. 163X5.41

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(This document contains a total of 3 sheets, including this title sheet.)

#### 1. General

During the interval covered by this progress letter, the major effort was directed toward expediting systems production.

#### 2. Production Status

- a. Four systems and two test sets were delivered during this report interval. Two additional systems and a system test set will be delivered during the early part of the coming report interval. In the future, three systems are scheduled to be delivered every two weeks.
- b. A total of 18 alternate second local-oscillator assemblies, providing facilities for restricted-scan operation of the airborne receiving set, have been delivered. An additional 20 assemblies, modified to include coaxial connectors, are ready for delivery. A kit of coax connectors, to be used for field modification of test fixtures, and two spare modified i-f assemblies were also delivered.

#### 3. System Improvements

- a. In a continuing program of system improvements, a standoff terminal is being installed on two of the r-f assemblies of
  systems currently in production. This is being done so that
  the oscillator signal circuits may be rerouted to eliminate
  spurious responses caused by undesired coupling between the
  first local-oscillator circuits of bands 4 and 5 and the
  distribution line which feeds the various r-f amplifiers. A
  modification kit is being prepared which will permit the
  incorporation of this change in systems in the field.
- b. To achieve a more uniform response of the ref distribution line, and thus improve the sensitivity of the system, a modified method of gating the ref amplifiers has been tested and appears to be satisfactory. However, additional design work will be

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required before the modification can be incorporated into present systems.

#### 4. Flight Tests

a. Flight tests have been performed on a system installed in the rearward portion of the aircraft, and which uses a scimitar antenna located in the tail fin of the aircraft.

System-intercept performance was satisfactory, but the aircraft pilot reported that the system was interfering with the operation of the AN/ARC-34 Radio Set. (This interference does not occur when System 3 is installed in the nose of the aircraft.) The aircraft contractor has been contacted to establish the cause of this interference.

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b. To facilitate the installation of the system in a aircraft, a system mock-up was furnished to the airframe contractor so that mounting brackets could be installed in the aircraft. Initial flight testing of the system in this installation is planned for the coming month.

### 5. Planning

During the next reporting interval, the major effort will continue to be directed toward systems production and completing the system tests indicated above.